



# California Legislature

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## Joint Legislative Audit Committee

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May 11, 1982

LR 108.1

The Honorable President pro Tempore of the Senate  
The Honorable Speaker of the Assembly  
The Honorable Members of the Senate and the  
Assembly of the Legislature of California

### Members of the Legislature:

On behalf of the Joint Legislative Audit Committee, I am pleased to submit this report on the Golden Gate Bridge District. This report reviews the district's response to the major increase in demand for ferry and feeder bus service resulting from the closure of major roads and highways in the north bay area, including closure of the Golden Gate Bridge, by the severe storms of January, 1982.

The report shows that the district responded quickly and effectively to the emergency situation. By augmenting existing ferry schedules and contracting for additional ferry service, the district was able to accommodate a ferry passenger demand level which reached an excess of eight times that normally experienced during winter months.

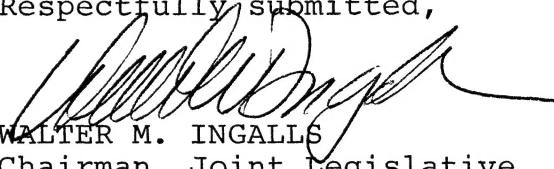
This extra service was provided at a net cost to the district of \$42,380. In my opinion this is a cost figure well within the bounds of expectation considering the overtime hours required of district staff, and the cost of outside contracting necessitated by the overwhelming demand for the service.

This episode clearly demonstrated the ability of the district's ferry service to provide a major transportation link between San Francisco and the north bay counties when

Members of the Legislature  
May 11, 1982  
Page 2

surface transportation facilities had failed. I of course hope that the need for this type of crises response will never recur. I am happy to report to my colleagues that should the need arise again that the bridge district has proven its capability to respond accordingly.

Respectfully submitted,



WALTER M. INGALLS  
Chairman, Joint Legislative  
Audit Committee

WMI:smh



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Thomas W. Hayes  
Auditor General

STATE OF CALIFORNIA  
**Office of the Auditor General**  
660 J STREET, SUITE 300  
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May 7, 1982

Letter Report 108.1

Honorable Walter M. Ingalls  
Chairman, and Members of the  
Joint Legislative Audit Committee  
925 L Street, Suite 750  
Sacramento, California 95814

Dear Mr. Chairman and Members:

In response to a request by the Joint Legislative Audit Committee, we have reviewed how the Ferry Division of the Golden Gate Bridge, Highway and Transportation District (district) met the additional demand for transit services during the severe storms that made roads in the area impassable during January 1982. This information supplements a February 1982 Auditor General Report (P-108) entitled, "Golden Gate Bridge, Highway and Transportation District: Response to Questions Posed by the Legislature." This review was conducted under the authority vested in the Auditor General by Sections 10527 through 10528 of the Government Code.

The district's Ferry Division responded to the additional passenger demand by increasing the frequency of its ferryboat service, augmenting the district's service by chartering private ferryboats, and providing additional bus service to and from the Larkspur ferry terminal.

BACKGROUND

The district's normal ferry services are provided by three ferryboats that operate between Larkspur and San Francisco and one ferryboat that operates between Sausalito and San Francisco. Each of the Larkspur boats can carry 725 passengers, while the capacity of the Sausalito boat is 575 passengers. Each weekday, the normal ferry schedule includes 6 crossings between Larkspur and San Francisco and 18 crossings between Sausalito and San Francisco. We estimate that the average ridership during the winter months is about 1,429 passengers per day on the Larkspur service and 1,263 passengers per day on the Sausalito service. In addition, the Sausalito service makes 12 crossings each Saturday and Sunday. The district also provides a bus service known as "feeder bus

Honorable Walter M. Ingalls  
Chairman, and Members of the  
Joint Legislative Audit Committee  
May 7, 1982  
Page 2

service" to and from the Larkspur and Sausalito ferry terminals. Each weekday, excluding holidays, there are 40 scheduled feeder bus trips to and from the Larkspur terminal and 26 trips to and from the Sausalito terminal.

#### SCOPE AND METHODOLOGY

To determine the actions taken by the district's Ferry Division to meet the additional passenger demand during the January 1982 emergency, we interviewed district personnel and examined district records. We also contacted the California Highway Patrol to determine the conditions of the roads in Marin and Sonoma counties during the emergency.

#### STUDY RESULTS

The sections that follow describe the additional services provided by the Ferry Division to accommodate the additional passenger demand during the emergency, and they discuss the additional costs associated with meeting this demand. The period for which the district provided additional ferry service because of storm damage lasted from January 4, 1982, through January 22, 1982.

#### Increased Ferry Service

The following chronology describes the storm, the resulting road conditions, and the Ferry Division's response to the additional passenger demand.

##### Monday, January 4, 1982

Heavy rainfall caused flooding in Marin and Sonoma counties. Most major roads became impassable by midday, and the evening commuter routes from San Francisco to the north bay counties could not be traveled. Early in the evening, a mudslide occurred on Highway 101, just north of the Golden Gate Bridge. This mudslide closed the road to all traffic entering and returning from San Francisco.

The Ferry Division provided four additional ferryboat crossings to accommodate the evening commuters from San Francisco to Larkspur. The total number of passengers for the day on the Larkspur service was 2,155. The Sausalito service operated on its normal schedule and carried 1,055 passengers for the day.

Honorable Walter M. Ingalls  
Chairman, and Members of the  
Joint Legislative Audit Committee  
May 7, 1982  
Page 3

Tuesday, January 5, 1982

Most major roads in Marin and Sonoma counties remained flooded. Highway 101 southbound and northbound was still closed because of mudslides.

The Ferry Division provided additional ferry service between Larkspur and San Francisco and additional feeder bus service to and from the Larkspur terminal. The ferryboats made a total of 44 crossings, carrying 8,157 passengers during the day. The Larkspur boats made 26 crossings and carried 5,730 passengers; the Sausalito boat made its normally scheduled 18 crossings and carried 2,427 passengers. The regular ferry feeder bus service operated to and from the Sausalito terminal.

Wednesday, January 6, 1982

Roads in Marin and Sonoma counties began to clear during the day. The mudslides just north of the Golden Gate Bridge on the southbound lanes of Highway 101 were cleared during the day, and late in the afternoon Highway 101 was opened to two lanes of traffic northbound and two lanes of traffic southbound.

The Ferry Division continued to provide additional ferry service between Larkspur and San Francisco and made two additional crossings between Sausalito and San Francisco. In addition, the district chartered three private ferryboats to increase the capacity of the Larkspur service. A total of 64 crossings were made, carrying a total of 16,146 passengers during the day: the Larkspur boats made 32 crossings and carried 10,600 passengers, the Sausalito boat made 20 crossings and carried 4,118 passengers, and the chartered boats made 12 crossings (between Larkspur and San Francisco) and carried 1,428 passengers. The district provided 130 feeder bus runs to and from the Larkspur ferry terminal. The regular feeder bus service operated to and from the Sausalito terminal.

Thursday, January 7, 1982

Flooding had subsided on most streets. Highway 101 remained open to two lanes of traffic northbound and two lanes of traffic southbound.

Honorable Walter M. Ingalls  
Chairman, and Members of the  
Joint Legislative Audit Committee  
May 7, 1982  
Page 4

The Ferry Division continued to provide increased ferry service by utilizing the district boats and the three chartered boats. A total of 50 crossings were made, carrying a total of 9,232 passengers during the day. The Larkspur boats made 28 crossings and carried 6,123 passengers, the Sausalito boat made its normal 18 crossings and carried 2,267 passengers, and the chartered boats made 4 crossings and carried 842 passengers. There were 144 feeder bus runs to and from the Larkspur terminal. Again, the regular feeder bus service operated to and from the Sausalito terminal.

Friday, January 8 through Friday, January 22, 1982

Nearly all commuting routes and local streets were clear, with the exception of the northbound lanes of Highway 101, which remained closed until the afternoon of January 17, 1982, when the State Department of Transportation completed the repair and reinforcement of the roadbed. During this period, the southbound portion of the highway was used for both northbound and southbound traffic: three lanes were used for the commute direction and one lane for the noncommute direction.

The Ferry Division continued to provide additional ferry service between Larkspur and San Francisco, gradually decreasing the frequency of crossings to the normal schedule as passenger demand returned to normal levels. The Sausalito ferry operated on its regular schedule and carried the normal number of passengers after the first week of the storm. The district also provided additional feeder bus service to the Larkspur terminal to correspond with the ferryboats' departures and arrivals.

Tables 1 and 2 on the following pages summarize the augmented ferry service provided between Larkspur and San Francisco and between Sausalito and San Francisco, and the additional feeder bus service to and from the Larkspur terminal. The period represented in these tables is from the beginning of the emergency period (January 4, 1982) until the northbound lanes of Highway 101 were reopened and ferry service returned to its normal schedule (January 22, 1982).

TABLE 1

FERRY SERVICE BETWEEN LARKSPUR AND SAN FRANCISCO  
AND FEEDER BUS SERVICE TO AND FROM LARKSPUR TERMINAL  
JANUARY 4, 1982 THROUGH JANUARY 22, 1982

Date of Service <sup>a</sup>	Number of Regularly Scheduled Ferry Crossings	Number of Additional Ferry Crossings	Total Number of Ferry Crossings	Total Passengers Traveling on Ferryboats	Number of Regularly Scheduled Feeder Bus Runs			Number of Additional Feeder Bus Runs	Total Number of Feeder Bus Runs
					Regulary Ferry Crossings	Additional Ferry Crossings	Ferry Crossings		
01/04/82	6	4	10	2,155	40	0	40	0	40
01/05/82	6	20	26	5,730	40	49	89	49	89
01/06/82	6	38 <sup>b</sup>	44	12,028	40	90	130	90	130
01/07/82	6	26	32	6,965	40	104	144	104	144
01/08/82	6	16	22	6,310	40	44	84	44	84
01/11/82	6	14	20	3,963	40	39	79	39	79
01/12/82	6	8	14	3,015	40	30	70	30	70
01/13/82	6	8	14	2,770	40	30	70	30	70
01/14/82	6	6	12	2,485	40	31	71	31	71
01/15/82	6	6	12	2,423	40	31	71	31	71
01/18/82	6	2	8	2,053	40	15	55	15	55
01/19/82	6	2	8	1,898	40	15	55	15	55
01/20/82	6	2	8	1,903	40	15	55	15	55
01/21/82	6	2	8	1,754	40	8	48	8	48
01/22/82	6	2	8	1,810	40	8	48	8	48
Total	90	156	246	57,262	600	509	1,109	509	1,109

<sup>a</sup> There is no weekend service between Larkspur and San Francisco.  
<sup>b</sup> Includes service provided by chartered private ferryboats.

TABLE 2  
FERRY SERVICE BETWEEN SAUSALITO AND SAN FRANCISCO  
AND FEEDER BUS SERVICE TO AND FROM SAUSALITO TERMINAL  
JANUARY 4, 1982 THROUGH JANUARY 22, 1982

Date of Service	Number of Regularly Scheduled Ferry Crossings	Number of Additional Ferry Crossings	Total Number of Ferry Crossings	Total Passengers Traveling on Ferryboats	Number of Regularly Scheduled Feeder Bus Runs	Number of Additional Feeder Bus Runs	Total Number of Feeder Bus Runs
01/04/82	18	0	18	1,055	26	0	26
01/05/82	18	0	18	2,427	26	0	26
01/06/82	18	2	20	4,118	26	0	26
01/07/82	18	0	18	2,267	26	0	26
01/08/82	18	0	18	2,290	26	0	26
01/09/82	12	0	12	1,484	0	0	0
01/10/82	12	0	12	870	0	0	0
01/11/82	18	0	18	1,519	26	0	26
01/12/82	18	0	18	1,594	26	0	26
01/13/82	18	0	18	1,341	26	0	26
01/14/82	18	0	18	1,189	26	0	26
01/15/82	18	0	18	1,507	26	0	26
01/16/82	12	0	12	1,228	0	0	0
01/17/82	12	0	12	765	0	0	0
01/18/82	18	0	18	1,053	26	0	26
01/19/82	18	0	18	846	26	0	26
01/20/82	18	0	18	794	26	0	26
01/21/82	18	0	18	991	26	0	26
01/22/82	18	0	18	1,213	26	0	26
Total	318	2	320	28,551	390	0	390

Honorable Walter M. Ingalls  
Chairman, and Members of the  
Joint Legislative Audit Committee  
May 7, 1982  
Page 7

Additional Cost of Increased Service

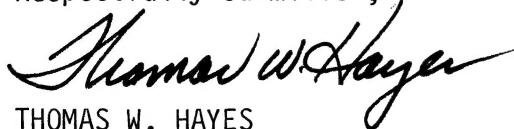
The operating costs of the Ferry Division increased when it provided additional services. The Ferry Division's revenue for the period also increased because of the additional ridership. We estimate that the revenue was \$68,496 greater than normal and that the Ferry Division's net additional operating costs resulting from the emergency were \$42,380. The following table details the types and amounts of these additional costs and shows the net additional costs after subtracting additional revenue.

TABLE 3

ESTIMATED ADDITIONAL OPERATING EXPENSES AND REVENUES  
OF THE FERRY DIVISION FOR INCREASED SERVICE PROVIDED  
JANUARY 4, 1982 THROUGH JANUARY 22, 1982

<u>Expenses</u>	<u>Amount</u>
Fuel	\$ 42,553
Wages and benefits	41,713
Charter of private ferryboats	13,000
Additional feeder bus services	12,782
Additional police services	<u>828</u>
Total additional operating expenses	\$110,876
<u>Revenues</u>	
Less additional revenue	<u>68,496</u>
Net additional operating expenses	<u>\$ 42,380</u>

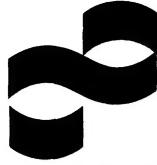
Respectfully submitted,



THOMAS W. HAYES  
Auditor General

Staff: Thomas A. Britting, Audit Manager  
Karen A. Nelson

Attachment: Response to the Auditor General's Report  
Golden Gate Bridge, Highway and Transportation  
District



GOLDEN GATE BRIDGE, HIGHWAY AND TRANSPORTATION DISTRICT

DALE W. LUEHRING  
GENERAL MANAGER

April 29, 1982

Thomas W. Hayes  
Auditor General  
660 "J" Street, Suite 300  
Sacramento, CA 95814

RE: Letter Report 108.1

Dear Mr. Hayes:

We have reviewed your letter report on the Golden Gate Ferry Division's response to the demand for additional transit services during the January 1982 storms. The report delineates the efforts made to meet the emergency and sets forth the data in an acceptable manner.

The District is pleased to be able to so graphically demonstrate to the Joint Legislative Committee the flexibility of the Ferry Division to respond to emergency situations.

Very truly yours,

Dale W. Luehring  
General Manager

DWL:RF:mb